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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/775,348	02/01/2001	Yechiam Yemini	18704-016	7200
56949	7590	06/09/2006	EXAMINER	
WILMER CUTLER PICKERING HALE AND DORR LLP			MILLS, DONALD L	
COLUMBIA UNIVERSITY			ART UNIT	
399 PARK AVENUE			PAPER NUMBER	
NEW YORK, NY 10020			2616	

DATE MAILED: 06/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/775,348

Applicant(s)

YEMINI ET AL.

Examiner

Donald L. Mills

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 7 is objected to because of the following informalities:

Regarding claim 7, the claim is a duplicate of claim 5. Appropriate correction is required.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting

Art Unit: 2616

ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-50 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-89 of copending Application No. 09/775,346. Although the conflicting claims are not identical, they are not patentably distinct from each other because, for example, the application claim 1 of 09/775,348 merely broadens the scope of the application claim 1 of 09/775,346 by eliminating the gateway Node. To eliminate the gateway node would have been obvious to one of ordinary skill in the art because if data traffic were communicated across a homogenous network a gateway node would be unnecessary and its elimination would simplify design. It has been held that the omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. *In re Karlson*, 136 USPQ 184 (CCPA). Also note *Ex parte Rainu*, 168 USPQ 375 (Bd. App. 1969); omission of a reference element whose function is not needed would be obvious to one skilled in the art.

4. Claims 1-50 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-40 of copending Application No. 09/775,347 in view of Bosack (US 5,088,032). Although the conflicting claims are not identical, they are not patentably distinct from each other because, for example, the application claim 1 of

Art Unit: 2616

09/775,347 specifies all of the limitations of application claim 1 of 09/775,348 except for configuring the network according to the path. Rochberger teaches paths from a root node A (first node) to a tentative node F (second node) using the already known routing paths (coordinate labels) and new links using the most optimal path through any intermediate nodes to configure the network according to the path selection (See column 4, lines 25-28 and 56-62.) To incorporate network path configuration would have been obvious to one of ordinary skill in the art at the time of the invention in order to perform routing as taught by Rochberger (See column 1, lines 39-46.)

5. Claims 1-50 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No.

09/775,349 in view of Bosack (US 5,088,032). Although the conflicting claims are not identical, they are not patentably distinct from each other because, for example, the application claim 1 of 09/775,349 specifies all of the limitations of application claim 1 of 09/775,348 except for configuring the network according to the path. Rochberger teaches paths from a root node A (first node) to a tentative node F (second node) using the already known routing paths (coordinate labels) and new links using the most optimal path through any intermediate nodes to configure the network according to the path selection (See column 4, lines 25-28 and 56-62.) To incorporate network path configuration would have been obvious to one of ordinary skill in the art at the time of the invention in order to perform routing as taught by Rochberger (See column 1, lines 39-46.)

6. Claims 1-50 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-44 of copending Application No.

Art Unit: 2616

09/775,350 in view of Rochberger et al. (US 6,061,736), hereinafter referred to as Rochberger.

Although the conflicting claims are not identical, they are not patentably distinct from each other because, for example, the application claim 1 of 09/775,350 specifies all of the limitations of the application claim 1 of 09/775,348 except for configuring the network according to the path.

Rochberger teaches paths from a root node A (first node) to a tentative node F (second node) using the already known routing paths (coordinate labels) and new links using the most optimal path through any intermediate nodes to configure the network according to the path selection (See column 4, lines 25-28 and 56-62.) To incorporate network path configuration would have been obvious to one of ordinary skill in the art at the time of the invention in order to perform routing as taught by Rochberger (See column 1, lines 39-46.)

7. These are provisional obviousness-type double patenting rejections because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 21, the claims recite *each node is assigned a set of one or more coordinate labels, each representing a path comprising one or more links... and the path between a first node and a second, non adjacent node... comprising a link connecting a third*

Art Unit: 2616

node and the second node (For example, see claim 1, lines 3-4 and 6-9.) If each node is assigned a “coordinate label” which represents a complete “path” comprising only one link, it would be impossible to establish a path between a first node and a second “non-adjacent node.” Since, the path would require at least two links, one link between the first and third nodes and a second link between the third and second nodes. Further explanation and clarification is requested.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-8, 12, 14, 17-20, 23, 33, 34, 36-38, 44, 45 and 47-49 are rejected under 35 U.S.C. 102(b) as being anticipated by Rochberger et al. (US 6,061,736), hereinafter referred to as Rochberger.

Regarding claims 1, 33, and 44, Rochberger discloses a method and apparatus for routing over similar paths, which comprises:

Each node is assigned a set of one or more coordinate labels, each representing a path comprising one or more links or other nodes (Referring to Figures 1-2B, root node A is chosen as a root node then the links are examined to determine possible routing paths (coordinate label comprising links). See column 3, lines 41-50;)

Each coordinate label is unique to the Node to which it is assigned (Referring to Figures 1-2B, since routing paths (coordinate labels) are based upon a selected root node, the paths are individualized and unique. See column 3, lines 41-50;)

A path between a first Node and a second, non-adjacent Node being determined by the first Node from one of the coordinate labels assigned to the first Node and one of the coordinate labels assigned to the second Node, the determined path comprising a Link connecting a third node and the second node (Referring to Figures 1-2B, paths from root node A (first node) to tentative node F (second node) is considered using the already known routing paths (coordinate labels) and new links using the most optimal path through any intermediate nodes (third node) as specified by a default number of hops. See column 4, lines 25-28 and 56-62.)

Said network is configured according to said path (Referring to Figures 1-2B, the network routing topology is configured according to the paths from the root nodes to the destination node. See column 4, lines 25-28 and 56-62.)

Regarding claim 2, Rochberger discloses *where said coordinate label represents a path between said Node to which said coordinate label is assigned and root node* (Referring to Figures 1-2B, paths from root node A (first node) to tentative node F (second node) is considered using the already known routing paths (coordinate labels) and new links using the most optimal path through any intermediate nodes (third node) as specified by a default number of hops. See column 4, lines 25-28 and 56-62.)

Regarding claim 3, Rochberger discloses *where the coordinate label represents a path between said node to which said coordinate label is assigned at least one of a plurality of root nodes* (Referring to Figures 1-2B, paths from root node A (first node) (one of a plurality of root

Art Unit: 2616

nodes) to tentative node F (second node) is considered using the already known routing paths (coordinate labels) and new links using the most optimal path through any intermediate nodes (third node) as specified by a default number of hops. See column 4, lines 25-28 and 56-62.)

Regarding claim 4, Rochberger discloses *where at least one of said plurality of Nodes is a computer file* (Referring to Figures 1-2B, nodes comprise computers, which comprise files. See column 1, lines 39-46.)

Regarding claim 5, Rochberger discloses *where at least one of said one or more links is a directory access path* (Referring to Figures 1-2B, nodes comprise computers, which comprise links between computers for access to data on the computers (directory access path). See column 1, lines 39-46.)

Regarding claim 6, Rochberger discloses *where at least one of said plurality of nodes is a computer process* (Referring to Figures 1-2B, nodes comprise computers, which comprise computer processes. See column 1, lines 39-46.)

Regarding claim 7, Rochberger discloses *where at least one of said one or more links is a directory access path* (Referring to Figures 1-2B, nodes comprise computers, which comprise links between computers for access to data on the computers (directory access path). See column 1, lines 39-46.)

Regarding claim 8, Rochberger discloses *where at least one of said links is a virtual link* (Referring to Figures 1-2B, root node A is chosen as a root node then the links are examined to determine possible routing paths (virtual links). See column 3, lines 41-50;)

Regarding claims 12, 34, and 45, Rochberger discloses *wherein each coordinate label representing a path comprises, in series, identifiers for links and nodes comprising said path*

Art Unit: 2616

(Referring to Figures 1-2B, root node A is chosen as a root node then the links are examined to determine possible routing paths (coordinate label comprising links nodes which comprise the path). See column 3, lines 41-50;)

Regarding claim 14, Rochberger discloses *wherein a node identifier is indexed to at least one of said set of one or more coordinate labels, where said at least one of said set of one or more coordinate labels corresponds to at least one of said plurality of nodes* (Referring to Figures 1-2B, root node A (node identifier) is chosen as a root node then the links are examined to determine possible routing paths (coordinate label). See column 3, lines 41-50.)

Regarding claims 17, 36, and 47, Rochberger discloses *said first node is a source node and said second node is a destination node and data is routed from said source node to said destination node via said path* (Referring to Figures 1-2B, paths from root node A (first node) to tentative node F (second node) is considered using the already known routing paths (coordinate labels) and new links using the most optimal. See column 4, lines 25-28 and 56-62.)

Regarding claims 18, 37, and 48, Rochberger discloses *wherein said data is routed to a plurality of destination nodes* (Referring to Figures 1-2B, paths from root node A (first node) to tentative node F (second node) is considered using the already known routing paths (destination) and new links using the most optimal path through any intermediate nodes (one of a plurality of destinations) as specified by a default number of hops. See column 4, lines 25-28 and 56-62.)

Regarding claim 19, Rochberger discloses *wherein a tree of routing paths is computed from at least one of said set of one or more coordinate labels* (Referring to Figures 1-2B, paths from root node A (first node) to tentative node F (second node) is considered using the already

Art Unit: 2616

known routing paths (coordinate labels), which forms a routing topology (tree of routing paths). See column 4, lines 25-28 and 56-62.)

Regarding claim 20, Rochberger discloses *wherein data is routed to at least one of said plurality of nodes according to said tree of routing paths* (Referring to Figures 1-2B, paths from root node A (first node) to tentative node F (second node) is considered using the already known routing paths (coordinate labels), which forms a routing topology (tree of routing paths). See column 4, lines 25-28 and 56-62.)

Regarding claims 23, 38, and 49, Rochberger discloses *where said set of one or more coordinate labels does not disclose information relating to a physical structure of said network* (Referring to Figures 1-2B, root node A is chosen as a root node then the links are examined to determine possible routing paths (coordinate label comprising links), which are unrelated to geographical position. See column 3, lines 41-50;)

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 9-11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rochberger (US 6,061,736) in view of Stern (US 5,191,626).

Regarding claim 9 as explained above in the rejection of claim 1, Rochberger discloses all of the claim limitations of claim 1 (parent claim).

Art Unit: 2616

Rochberger does not disclose *where at least one of said one or more links is an optical link.*

Stern teaches an optical communications system and method which comprises optical interconnections (See column 2, lines 5-8.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the links of Rochberger as the optical links of Stern. One of ordinary skill in the art at the time the invention was made would have been motivated to do so in order to integrate the routing method of Rochberger in heterogeneous networks comprising optical access. An added benefit of doing so would allow easy integration with legacy and newer, progressive networks.

Regarding claim 10 as explained above in the rejection of claim 1, Rochberger discloses all of the claim limitations of claim 1 (parent claim).

Rochberger does not disclose *where at least one of said set of one or more coordinate labels includes a wavelength identifier.*

Stern teaches an optical communications system and method, which comprises a network control center that assigns a suitable end-to-end path or paths, a waveband, and a channel (wavelength identifier).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the links of Rochberger as the optical links of Stern. One of ordinary skill in the art at the time the invention was made would have been motivated to do so in order to integrate the routing method of Rochberger in heterogeneous networks comprising optical

Art Unit: 2616

access. An added benefit of doing so would allow easy integration with legacy and newer, progressive networks.

Regarding claim 11 as explained above in the rejection of claim 1, Rochberger discloses all of the claim limitations of claim 1 (parent claim).

Rochberger does not disclose *wherein at least one of said set of one or more coordinate labels includes a wavelength of an optical link*.

Stern teaches an optical communications system and method, which comprises a network control center that assigns a suitable end-to-end path or paths, a waveband (wavelength of an optical link), and a channel.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the links of Rochberger as the optical links of Stern. One of ordinary skill in the art at the time the invention was made would have been motivated to do so in order to integrate the routing method of Rochberger in heterogeneous networks comprising optical access. An added benefit of doing so would allow easy integration with legacy and newer, progressive networks.

14. Claims 13, 15, 16, 21, 22, 24, 28-32, 35, 39-43, 46 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rochberger (US 6,061,736) in view of Bosack (US 5,088,032).

Regarding claims 13, 35, and 46 as explained in the rejection statement of the parent claims, Rochberger discloses all of the claim limitations of the parent claims.

Art Unit: 2616

Rochberger does not disclose *wherein each of said set of one or more coordinate labels is periodically updated to reflect changes in said path.*

Bosack teaches revising metric information for a path due to processing an incoming routing update (See column 6, lines 11-13.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the periodic update of Bosack in the system of Rochberger. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to prevent system outage due to link failure, thereby making the system more robust as taught by Bosack (See column 3, lines 1-2.)

Regarding claim 15, as explained in the rejection statement of claim 1, Rochberger discloses all of the claim limitations of claim 1 (parent claim).

Rochberger does not disclose *wherein at least one of said coordinate labels contains path information from said network and a second network.*

Bosack teaches a method and apparatus for routing communications among computer networks which comprises gateways and destination gateways (Referring to Figure 2.) Bosack also teaches gateways, which by definition interconnect two networks (See column 3, lines 32-40.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the gateways connecting multiple networks of Bosack in the system of Rochberger. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to merge legacy networks with newer networks as computer networks get larger and larger as taught by Rochberger (See column 1, lines 22-25.)

Art Unit: 2616

Regarding claim 16 as explained in the rejection statement of claim 1, Rochberger discloses all of the claim limitations of claim 1 (parent claim).

Rochberger does not disclose *where said path information from said second network indicates a backbone address.*

Bosack teaches a method and apparatus for routing communications among computer networks which comprises gateways and destination gateways, which comprises link information for connection to gateway 76 that has an address (Referring to Figure 2.) Bosack also teaches gateways, which by definition interconnect two networks (See column 3, lines 32-40.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the gateways connecting multiple networks of Bosack in the system of Rochberger. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to merge legacy networks with newer networks as computer networks get larger and larger as taught by Rochberger (See column 1, lines 22-25.)

Regarding claim 21 as explained in the rejection statement of claim 1, Rochberger discloses all of the claim limitations of claim 1 (parent claim).

Rochberger does not disclose *wherein a multi-cast tree is computed from a plurality of said set of one or more coordinate labels.*

Bosack teaches paths between the gateway and destination gateways (thereby forming a tree of paths) are compiled based on the description of each data link between the gateway and destination gateway and data is routed between the gateway and the destination gateways (multi-cast tree) via the links during broadcasts (See column 5, lines 17-19 and lines 28-60.)

Art Unit: 2616

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the broadcasting gateways of Bosack in the system of Rochberger. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to merge legacy networks with newer networks as computer networks get larger and larger as taught by Rochberger (See column 1, lines 22-25.)

Regarding claim 22 as explained in the rejection statement of claim 1, Rochberger discloses all of the claim limitations of claim 1 (parent claim).

Rochberger does not disclose *where data is routed to a plurality of said plurality of nodes according to said multi-cast tree.*

Bosack teaches paths between the gateway and destination gateways (thereby forming a tree of paths) are compiled based on the description of each data link between the gateway and destination gateway and data is routed between the gateway and the destination gateways via the links during broadcasts (See column 5, lines 17-19 and lines 28-60.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the broadcasting gateways of Bosack in the system of Rochberger. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to merge legacy networks with newer networks as computer networks get larger and larger as taught by Rochberger (See column 1, lines 22-25.)

Regarding claim 24 as explained above in the rejection statement of claim 1, Rochberger discloses all of the claim limitations of claim 1 (parent claim).

Rochberger does not disclose *where said network is a MPLS network.*

Art Unit: 2616

Bosack teaches routing communications among network computers comprising gateways, which by definition interconnect two networks, such as, a land microwave network and a satellite network (See column 3, lines 32-40.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement a MPLS packet based network in the system of Bosack and Rochberger. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to conform to such a well-known standard.

Regarding claims 28 and 39 as explained in the rejection statement of the parent claims, Rochberger discloses all of the claim limitations of the parent claims.

Rochberger does not disclose *where said network is reconfigured based upon a second path upon the occurrence of a network event.*

Bosack teaches during a change for the worse, for example a lost path, is propagated through the system to the gateway, which requires transmission along different paths (See column 6, lines 21-27.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the periodic update of Bosack in the system of Rochberger. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to prevent system outage due to link failure, thereby making the system more robust as taught by Bosack (See column 3, lines 1-2.)

Regarding claims 29 and 40 as explained in the rejection statement of the parent claims, Rochberger discloses all of the claim limitations of the parent claims.

Rochberger does not disclose *where said event is the failure of a link on said path.*

Art Unit: 2616

Bosack teaches a change for the worse, for example a lost path, is propagated through the system to the gateway, which requires transmission along different paths (See column 6, lines 21-27.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the periodic update of Bosack in the system of Rochberger. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to prevent system outage due to link failure, thereby making the system more robust as taught by Bosack (See column 3, lines 1-2.)

Regarding claims 30 and 41 as explained in the rejection statement of the parent claims, Rochberger discloses all of the claim limitations of the parent claims.

Rochberger does not disclose *where said event is the failure of a node on said path.*

Bosack teaches a change for the worse, for example a lost path or node, is propagated through the system to the gateway, which requires transmission along different paths (See column 6, lines 21-27.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the periodic update of Bosack in the system of Rochberger. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to prevent system outage due to link failure, thereby making the system more robust as taught by Bosack (See column 3, lines 1-2.)

Regarding claims 31 and 42 as explained in the rejection statement of the parent claims, Rochberger discloses all of the claim limitations of the parent claims.

Rochberger does not disclose *where said event is the movement of a node on said path.*

Art Unit: 2616

Bosack teaches a change for the worse, for example a lost path or node, is propagated through the system to the gateway, which requires transmission along different paths (See column 6, lines 21-27.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the periodic update of Bosack in the system of Rochberger. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to prevent system outage due to link failure, thereby making the system more robust as taught by Bosack (See column 3, lines 1-2.)

Regarding claims 32, 43, and 50 as explained in the rejection statement of the parent claims, Rochberger discloses all of the claim limitations of the parent claims.

Rochberger does not disclose *where said one or more coordinate labels is further comprised of coordinate labels from a first virtual network, and coordinate labels from at least one second network.*

Bosack teaches a method and apparatus for routing communications among computer networks which comprises gateways and destination gateways (Referring to Figure 2.) Bosack also teaches gateways, which by definition interconnect two networks (See column 3, lines 32-40.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the gateways connecting multiple networks of Bosack in the system of Rochberger. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to merge legacy networks with newer networks as computer networks get larger and larger as taught by Rochberger (See column 1, lines 22-25.)

Art Unit: 2616

15. Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rochberger (US 6,061,736) in view of Rekhter et al. (US 6,526,056 B1), hereinafter referred to as Rekhter.

Regarding claim 25 as explained in the rejection statement of claim 1, Rochberger discloses all of the claim limitations of claim 1 (parent claim).

Rochberger does not disclose *where said nodes are assigned to said set of one or more coordinate labels through the use of a MPLS label switching table.*

Rekhter teaches tagging packets with network protocol information to forward packets from one link to another along an internetwork path from the source interface to the ultimate destination interface (See column 7, lines 39-65.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the packet tagging of Rekhter in the system of Rochberger. One of ordinary skill in the art at the time the invention was made would have been motivated to do so in order to send packets from source to destination utilizing the most efficient established path available.

Regarding claim 26 as explained in the rejection statement of claim 1, Rochberger discloses all of the claim limitations of claim 1 (parent claim).

Rochberger does not disclose *where said path is used to calculate a MPLS routing table.*

Rekhter teaches tagging packets with network protocol information to forward packets from one link to another along an internetwork path from the source interface to the ultimate destination interface (See column 7, lines 39-65.)

Art Unit: 2616

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the packet tagging of Rekhter in the routing system of Rochberger. One of ordinary skill in the art at the time the invention was made would have been motivated to do so in order to send packets from source to destination utilizing the most efficient path available.

Regarding claim 27 as explained in the rejection statement of claim 1, Rochberger discloses all of the claim limitations of claim 1 (parent claim).

Rochberger does not disclose *where said path is used to support MPLS explicit routing*.

Rekhter teaches tagging packets with network protocol information to forward packets from one link to another along an internetwork path from the source interface to the ultimate destination interface (See column 7, lines 39-65.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the packet tagging of Rekhter in the routing system of Rochberger. One of ordinary skill in the art at the time the invention was made would have been motivated to do so in order to send packets from source to destination utilizing the most efficient path available.

Response to Arguments

16. Applicant's arguments with respect to claims 1-50 have been considered but are moot in view of the new ground(s) of rejection.

Remarks

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2616

- a. Oberlin et al. (US 5,784,706) Defined virtual addresses for processing elements with routing tags (Specifically, see column 12, lines 25-31.)
- b. Walsh, Robert J., "DART: Fast Application-Level Networking via Data-Copy Avoidance." IEEE Network, July/August 1997. pp 28-38.

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L. Mills whose telephone number is 571-272-3094. The examiner can normally be reached on 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Donald L Mills

DLM

May 24, 2006

Seema S. Rao
SEEMA S. RAO 5/29/06

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